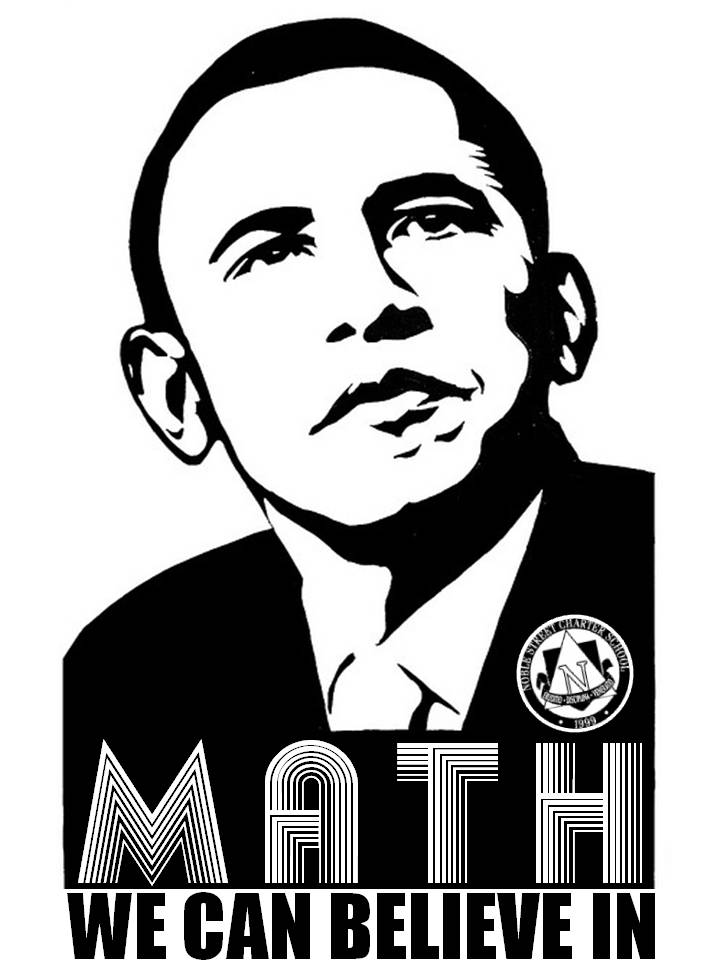
Name:

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Geometry, Period

Date: Mon, 9 Sep 2015



**Geometry Class Work**

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| **CRS** | **FUN 502** Express sine, cosine, and tangent of an angle in a right triangle as a ratio of given side lengths; **FUN 602** Apply basic trigonometric ratios to solve right triangle problems. **G-SRT.8** Use trigonometric ratios and the Pythagorean Theorem to solve right triangles in applied problems. |
| **Objective** | 10.4 Write a ratio for sine, cosine, and tangent when side lengths are variables or number values given a figure, given a word problem, or given one of the side length ratios OR given the angle measure and one side length of a right triangle, find the side length of the triangle |

Directions: For these problems, you’ll need to use ALL of your right triangle knowledge – Pythagorean Theorem, Pythagorean triples, special right triangles, trig, and inverse trig. Often multiple techniques will work, and you can choose. Think carefully about which technique will solve the problem & be easiest for you! These can be tricky. ***STRUGGLE!*** Before asking a question, sketch the figure, label what you know, and write the formula you think you’ll need.

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| 1. (a)     respectively. Draw & label the triangle.  (b) What is the value of cos∠A?    (c) What is the measure of angle A? | 1. (a)     (b) What is the measure of angle A?  (c) What is the length of the hypotenuse? |
| 1. In the figure below, ABCD is a square whose side is 8 units. Find the length of diagonal AC in simplified radical form and to the nearest tenth.   http://regentsprep.org/Regents/math/ALGEBRA/AT2/Pracpic8.gif | 1. http://regentsprep.org/Regents/math/ALGEBRA/AT2/PracTr48.gif   http://regentsprep.org/Regents/math/ALGEBRA/AT2/PracTr49.gif   1. http://regentsprep.org/Regents/math/ALGEBRA/AT2/PracTr50.gif C. http://regentsprep.org/Regents/math/ALGEBRA/AT2/PracTr51.gif 2. http://regentsprep.org/Regents/math/ALGEBRA/AT2/PracTr52.gif D. http://regentsprep.org/Regents/math/ALGEBRA/AT2/PracTr53.gif |
| 1. Find the perimeter of the triangle. Round to the nearest tenth.     A. 37.9 in  B. 57.4 in  C. 137.3 in  D. 161.8 in  E. 186.3 in | 1. In the figure below, ABCD is a rectangle with a perimeter is 30. The length of BE is 12.   http://regentsprep.org/Regents/math/ALGEBRA/AT2/Pracpic5.gif  (a) What is the length of side CE? *(Hint: it’s not 13)*  (b) Find the measure of angle E to the nearest degree. |
| 1. Two vertical poles, one 3 meters tall and the other 5 meters tall, stand a certain distance apart. A line from the top of the shorter pole to the top of the taller pole makes a 15 angle with a horizontal line. Which of the following expresses the horizontal distance, in meters, between the bases of the two poles (rounded to the nearest hundredth)?   A. 0.54  B. -7.46  C. 1.34  D. 0.13  E. 7.46 | 1. Circle ALL the statements that apply to this triangle: 2. http://regentsprep.org/Regents/math/ALGEBRA/AT2/Pracpic.gifhttp://regentsprep.org/Regents/math/ALGEBRA/AT2/PracTr1.gif 3. http://regentsprep.org/Regents/math/ALGEBRA/AT2/PracTr2.gif 4. http://regentsprep.org/Regents/math/ALGEBRA/AT2/PracTr3.gif 5. http://regentsprep.org/Regents/math/ALGEBRA/AT2/PracTr4.gif |
| 1. You have an extension ladder that you are using to repair a 14-foot chimney with an angle of 75.5°. Which trig ratio could be used to find the length required for the extension ladder to reach the top of the chimney?   A.  B.  C.  D. | 1. http://regentsprep.org/Regents/math/ALGEBRA/AT2/Pracpic7.gif Given the figure below, what is the measure of  x + y? Show your work or explain your answer in the space provided: |
| ***http://regentsprep.org/Regents/math/ALGEBRA/AT2/Pracpic9.gifChallenge Problem!*** *Solve for x & y, and you can start your homework!* | |